

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
21 June 2001 (21.06.2001)

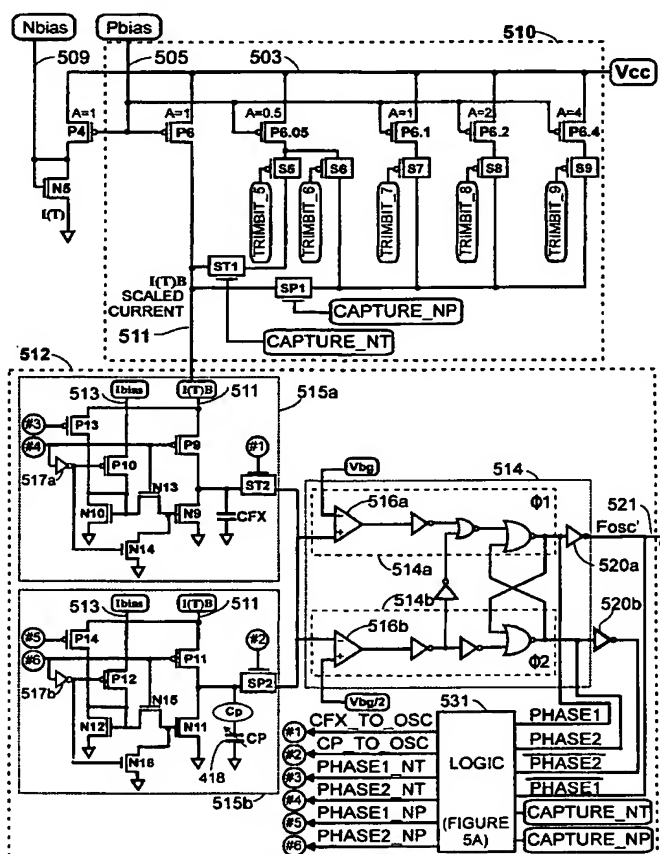
PCT

(10) International Publication Number  
**WO 01/44000 A1**

- (51) International Patent Classification<sup>7</sup>: **B60C 23/04** (74) Agent: **COHN, Howard, M.**; c/o CcRobert W. Brown  
Dept. 823, The Goodyear Tire & Rubber Company, 1144  
East Market Street, Akron, OH 44309-3531 (US).
- (21) International Application Number: **PCT/US99/29890**
- (22) International Filing Date:  
15 December 1999 (15.12.1999)
- (25) Filing Language: English
- (26) Publication Language: English
- (71) Applicant (for all designated States except US): **THE  
GOODYEAR TIRE & RUBBER COMPANY [US/US];**  
1144 East Market Street, Akron, OH 44316-0001 (US).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): **YONES, Dale, Lee**  
[US/US]; Apartment 133, 5610 Arapahoe Road, Boulder,  
CO 80303 (US).
- (81) Designated States (*national*): AE, AL, AM, AT, AU, AZ,  
BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK,  
DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,  
IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU,  
LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT,  
RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA,  
UG, US, UZ, VN, YU, ZA, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM,  
KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent  
(AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent  
(AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU,  
MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM,  
GA, GN, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: RELAXATION OSCILLATOR FOR TRANSPONDER



(57) Abstract: A relaxation oscillator for a transponder (102, 200, 400) capable of measuring one or more parameters (e.g., temperature, pressure) in an object (e.g., a tire, 104) and transmitting a data stream (Figures 3C, 4B) to an external reader/interrogator (106). The transponder typically operates in a passive mode, deriving its power (V<sub>xx</sub>, V<sub>cc</sub>, V<sub>dd</sub>) from an RF interrogation signal received by an antenna system (210, 410), but can also operate in a battery-powered active mode. The transponder includes memory (238, 438) for storing measurements, calibration data, programmable trim settings (436b), transponder ID and the like. Measurement readings (N<sub>T</sub>, N<sub>p</sub>) comprise counting oscillations of a measurement signal (Fosc') during a fixed time window (t<sub>w</sub>, t<sub>T</sub>, t<sub>p</sub>). The measurement signal is generated by a relaxation oscillator (252, 312, 452, 512) driven by the alternating charging and discharging of measurement capacitors (C<sub>FX</sub>, C<sub>p</sub>), wherein the capacitor charging rate is a function of current (a measurement current I(T)B which may be indicative of temperature), and of capacitance (which may be indicative of pressure).

WO 01/44000 A1

WO 01/44000 A1



**Published:**

— With international search report.

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

CORRECTED VERSION

(19) World Intellectual Property Organization  
International Bureau(43) International Publication Date  
21 June 2001 (21.06.2001)

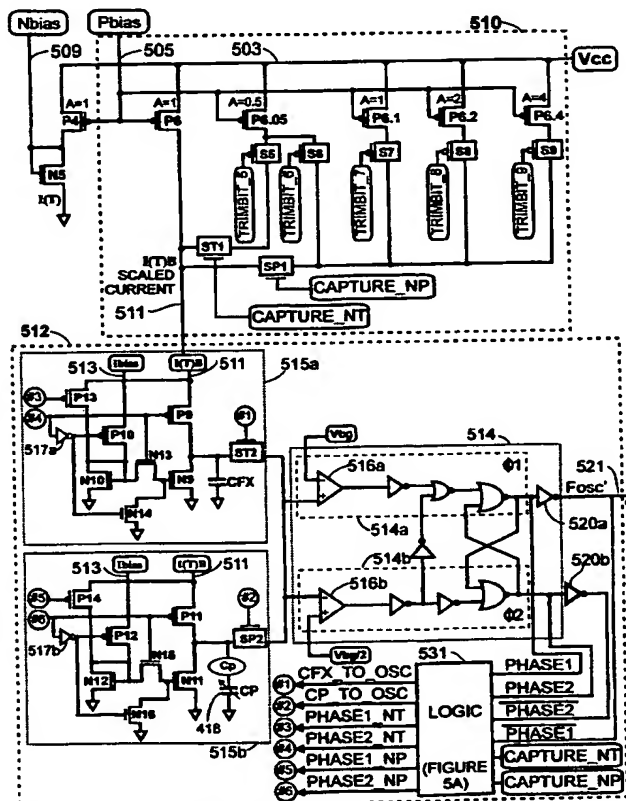
PCT

(10) International Publication Number  
**WO 01/44000 A1**(51) International Patent Classification<sup>7</sup>: **B60C 23/04**(21) International Application Number: **PCT/US99/29890**(22) International Filing Date:  
15 December 1999 (15.12.1999)(25) Filing Language: **English**(26) Publication Language: **English**(30) Priority Data:  
60/134,455 17 May 1999 (17.05.1999) **US**(71) Applicant (for all designated States except US): **THE GOODYEAR TIRE & RUBBER COMPANY [US/US];**  
1144 East Market Street, Akron, OH 44316-0001 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **YONES, Dale, Lee**  
[US/US]; Apartment 133, 5610 Arapahoe Road, Boulder,  
CO 80303 (US).(74) Agent: **COHN, Howard, M.; c/o CcRobert W. Brown**  
Dept. 823, The Goodyear Tire & Rubber Company, 1144  
East Market Street, Akron, OH 44309-3531 (US).(81) Designated States (national): **AE, AL, AM, AT, AU, AZ,**  
**BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK,**  
**DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,**  
**IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU,**  
**LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT,**  
**RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA,**  
**UG, US, UZ, VN, YU, ZA, ZW.**

[Continued on next page]

(54) Title: **RELAXATION OSCILLATOR FOR TRANSPONDER**

(57) Abstract: A relaxation oscillator for a transponder (102, 200, 400) capable of measuring one or more parameters (e.g., temperature, pressure) in an object (e.g., a tire, 104) and transmitting a data stream (Figures 3C, 4B) to an external reader/interrogator (106). The transponder typically operates in a passive mode, deriving its power ( $V_{xx}$ ,  $V_{cc}$ ,  $V_{dd}$ ) from an RF interrogation signal received by an antenna system (210, 410), but can also operate in a battery-powered active mode. The transponder includes memory (238, 438) for storing measurements, calibration data, programmable trim settings (436b), transponder ID and the like. Measurement readings ( $N_T$ ,  $N_P$ ) comprise counting oscillations of a measurement signal ( $F_{osc}$ ) during a fixed time window ( $t_w$ ,  $t_T$ ,  $t_P$ ). The measurement signal is generated by a relaxation oscillator (252, 312, 452, 512) driven by the alternating charging and discharging of measurement capacitors ( $C_{FX}$ ,  $C_P$ ), wherein the capacitor charging rate is a function of current (a measurement current  $I(T)B$  which may be indicative of temperature), and of capacitance (which may be indicative of pressure).

WO 01/44000 A1



(84) **Designated States (regional):** ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

(48) **Date of publication of this corrected version:**

4 October 2001

(15) **Information about Correction:**

see PCT Gazette No. 40/2001 of 4 October 2001, Section II

**Published:**

— with international search report

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

# PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

# PCT

NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL SEARCH REPORT  
OR THE DECLARATION

(PCT Rule 44.1)

To:

The Goodyear Tire and Rubber Comp.  
c/o Robert W. Brown-Dept 823  
Attn. Cohn, Howard, M.  
1144 East Market Street  
Akron, Ohio 44309-3531  
UNITED STATES OF AMERICA

Date of mailing  
(day/month/year)

28/07/2000

Applicant's or agent's file reference

DN1999116PCT

**FOR FURTHER ACTION**

See paragraphs 1 and 4 below

International application No.

PCT/US 99/ 29890

International filing date

(day/month/year)

15/12/1999

Applicant

THE GOODYEAR TIRE & RUBBER COMPANY

1. ☒ The applicant is hereby notified that the International Search Report has been established and is transmitted herewith.

**Filing of amendments and statement under Article 19:**

The applicant is entitled, if he so wishes, to amend the claims of the International Application (see Rule 46):

**When?** The time limit for filing such amendments is normally 2 months from the date of transmittal of the International Search Report; however, for more details, see the notes on the accompanying sheet.

**Where?** Directly to the International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland  
Facsimile No.: (41-22) 740.14.35

For more detailed instructions, see the notes on the accompanying sheet.

2. ☐ The applicant is hereby notified that no International Search Report will be established and that the declaration under Article 17(2)(a) to that effect is transmitted herewith.

3. ☐ With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.

☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Further action(s):** The applicant is reminded of the following:

Shortly after **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for international publication.

Within **19 months** from the priority date, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later).

Within **20 months** from the priority date, the applicant must perform the prescribed acts for entry into the national phase before all designated Offices which have not been elected in the demand or in a later election within 19 months from the priority date or could not be elected because they are not bound by Chapter II.

Name and mailing address of the International Searching Authority



European Patent Office, P.B. 5818 Patentlaan 2  
NL-2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Brigitta Klág

**RECEIVED**

**AUG 2 2000**

**GOODYEAR PATENT  
& TRADEMARK DEPT.**

## NOTES TO FORM PCT/ISA/220

These Notes are intended to give the basic instructions concerning the filing of amendments under article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the PCT Applicant's Guide, a publication of WIPO.

In these Notes, "Article", "Rule", and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions respectively.

### INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international publication. Furthermore, it should be emphasized that provisional protection is available in some States only.

#### What parts of the international application may be amended?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

#### When?

Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

#### Where not to file the amendments?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been/is filed, see below.

#### How?

Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Administrative Instructions, Section 205(b)).

The amendments must be made in the language in which the international application is to be published.

#### What documents must/may accompany the amendments?

##### Letter (Section 205(b)):

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

## NOTES TO FORM PCT/ISA/220 (continued)

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identical indications concerning several claims may be grouped), whether

- (i) the claim is unchanged;
- (ii) the claim is cancelled;
- (iii) the claim is new;
- (iv) the claim replaces one or more claims as filed;
- (v) the claim is the result of the division of a claim as filed.

**The following examples illustrate the manner in which amendments must be explained in the accompanying letter:**

1. [Where originally there were 48 claims and after amendment of some claims there are 51]:  
"Claims 1 to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers; claims 30, 33 and 36 unchanged; new claims 49 to 51 added."
2. [Where originally there were 15 claims and after amendment of all claims there are 11]:  
"Claims 1 to 15 replaced by amended claims 1 to 11."
3. [Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims]:  
"Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added." or  
"Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged."
4. [Where various kinds of amendments are made]:  
"Claims 1-10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 16 and 17; new claims 20 and 21 added."

### **"Statement under article 19(1)" (Rule 46.4)**

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

**It must be in the language in which the international application is to be published.**

It must be brief, not exceeding 500 words if in English or if translated into English.

It should not be confused with and does not replace the letter indicating the differences between the claims as filed and as amended. It must be filed on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)."

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

### **Consequence if a demand for international preliminary examination has already been filed**

If, at the time of filing any amendments under Article 19, a demand for international preliminary examination has already been submitted, the applicant must preferably, at the same time of filing the amendments with the International Bureau, also file a copy of such amendments with the International Preliminary Examining Authority (see Rule 62.2(a), first sentence).

### **Consequence with regard to translation of the international application for entry into the national phase**

The applicant's attention is drawn to the fact that, where upon entry into the national phase, a translation of the claims as amended under Article 19 may have to be furnished to the designated/elected Offices, instead of, or in addition to, the translation of the claims as filed.

For further details on the requirements of each designated/elected Office, see Volume II of the PCT Applicant's Guide.

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>DN1999116PCT</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/US 99/ 29890</b>	International filing date (day/month/year) <b>15/12/1999</b>	(Earliest) Priority Date (day/month/year)
Applicant <b>THE GOODYEAR TIRE &amp; RUBBER COMPANY</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

## 1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☐ the text is approved as submitted by the applicant.

☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☒ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

5

☐ None of the figures.



# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 99/ 29890

## Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)

The part beginning with the words "By using a" (line 13).  
and ending in the words "measured parameters" (line 17) is deleted.

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 99/29890

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 B60C23/04

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B60C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 99 52723 A (BROWN ROBERT WALTER ; POLLACK RICHARD STEPHEN (US); YONES DALE LEE) 21 October 1999 (1999-10-21) page 27, line 24 -page 28, line 21; figure 3 page 25, line 12 -page 26, line 25 -----	1, 12, 21



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

## \* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

18 July 2000

Date of mailing of the international search report

28/07/2000

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Smeyers, H



# INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 99/29890

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 B60C23/04

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B60C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 99 52723 A (BROWN ROBERT WALTER ; POLLACK RICHARD STEPHEN (US); YONES DALE LEE) 21 October 1999 (1999-10-21) page 27, line 24 -page 28, line 21; figure 3 page 25, line 12 -page 26, line 25 -----	1, 12, 21

☐ Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

### \* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

18 July 2000

Date of mailing of the international search report

28/07/2000

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Smeyers, H

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 99/29890

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9952723 A	21-10-1999	AU 7111398 A	01-11-1999

10/04972

12 9 44 PCT/PTO 07 NOV 200

**CERTIFICATE OF MAILING BY "EXPRESS MAIL" (37 CFR 1.10)**

Applicant(s): Yones

Docket No.

DN1999116USA

Serial No.

Filing Date

concurrently herewith

Examiner

Group Art Unit

Invention: **RELAXATION OSCILLATOR FOR TRANSPONDER**

I hereby certify that the following correspondence:

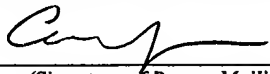
**DECLARATION AND POWER OF ATTORNEY***(Identify type of correspondence)*

is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 in an envelope addressed to: The Assistant Commissioner for Patents, Washington, D.C. 20231 on

November 7, 2001*(Date)*Catherine Senkfor*(Typed or Printed Name of Person Mailing Correspondence)**(Signature of Person Mailing Correspondence)*ET716351896US*("Express Mail" Mailing Label Number)***Note: Each paper must have its own certificate of mailing.**

10/049/24

PCT/PTO 07 NOV 2001

<b>CERTIFICATE OF MAILING BY "EXPRESS MAIL" (37 CFR 1.10)</b> Applicant(s): Yones			Docket No. DN1999116USA
Serial No.	Filing Date concurrently herewith	Examiner	Group Art Unit
Invention: <b>RELAXATION OSCILLATOR FOR TRANSPONDER</b>			
I hereby certify that the following correspondence: <div style="border: 1px solid black; padding: 10px; text-align: center;"><b>INTERNATIONAL PRELIMINARY EXAMINATION REPORT</b></div> <i>(Identify type of correspondence)</i> is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 in an envelope addressed to: The Assistant Commissioner for Patents, Washington, D.C. 20231 on <u>November 7, 2001</u> <i>(Date)</i> <div style="text-align: right; margin-top: 20px;"><u>Catherine Senkfor</u> <i>(Typed or Printed Name of Person Mailing Correspondence)</i>  <i>(Signature of Person Mailing Correspondence)</i> <u>ET716351896US</u> <i>("Express Mail" Mailing Label Number)</i></div>			
Note: Each paper must have its own certificate of mailing.			

**CERTIFICATE OF MAILING BY "EXPRESS MAIL" (37 CFR 1.10)**

Applicant(s): Yones

Docket No.

DN1999116USA

Serial No.

Filing Date  
concurrently herewith

Examiner

Group Art Unit

Invention: **RELAXATION OSCILLATOR FOR TRANSPONDER**


I hereby certify that the following correspondence:

**INTERNATIONAL SEARCH REPORT***(Identify type of correspondence)*

is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 in an envelope addressed to: The Assistant Commissioner for Patents, Washington, D.C. 20231 on

November 7, 2001*(Date)*Catherine Senkfor*(Typed or Printed Name of Person Mailing Correspondence)**(Signature of Person Mailing Correspondence)*ET716351896US*("Express Mail" Mailing Label Number)***Note: Each paper must have its own certificate of mailing.**



<b>CERTIFICATE OF MAILING BY "EXPRESS MAIL" (37 CFR 1.10)</b> Applicant(s): Yones			Docket No. DN1999116USA
Serial No.	Filing Date concurrently herewith	Examiner	Group Art Unit
Invention: <b>RELAXATION OSCILLATOR FOR TRANSPONDER</b>			
<p>I hereby certify that the following correspondence:</p> <div style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <b>INFORMATION DISCLOSURE STATEMENT, PTO-1449 AND REFERENCES</b> </div> <p style="text-align: center;"><i>(Identify type of correspondence)</i></p> <p>is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 in an envelope addressed to: The Assistant Commissioner for Patents, Washington, D.C. 20231 on</p> <p style="text-align: center;"> <u>November 7, 2001</u>  <i>(Date)</i> </p> <div style="text-align: right; margin-top: 20px;"> <p><b>Catherine Senkfor</b>  <i>(Typed or Printed Name of Person Mailing Correspondence)</i></p> <p>  <i>(Signature of Person Mailing Correspondence)</i></p> <p><b>ET716351896US</b>  <i>("Express Mail" Mailing Label Number)</i></p> </div>			
<p><b>Note: Each paper must have its own certificate of mailing.</b></p>			

10/049724

18 Rec'd PCT/PTO 07 NOV 2001

**CERTIFICATE OF MAILING BY "EXPRESS MAIL" (37 CFR 1.10)**

Applicant(s): Yones

Docket No.

DN1999116USA

Serial No.

Filing Date  
concurrently herewith

Examiner

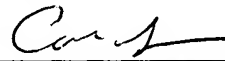
Group Art Unit

Invention: **RELAXATION OSCILLATOR FOR TRANSPONDER**

I hereby certify that the following correspondence:

**PRELIMINARY AMENDMENT***(Identify type of correspondence)*

is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 in an envelope addressed to: The Assistant Commissioner for Patents, Washington, D.C. 20231 on

November 7, 2001*(Date)*Catherine Senkfor*(Typed or Printed Name of Person Mailing Correspondence)**(Signature of Person Mailing Correspondence)*ET716351896US*("Express Mail" Mailing Label Number)***Note: Each paper must have its own certificate of mailing.**

10/049724

## CERTIFICATE OF MAILING BY "EXPRESS MAIL" (37 CFR 1.10)

Applicant(s): Yones

Docket No.

DN1999116USA

Serial No.

Filing Date  
concurrently herewith

Examiner

Group Art Unit

JON R. H. PCT/PTC 07 NOV 2001

Invention: RELAXATION OSCILLATOR FOR TRANSPONDER

I hereby certify that the following correspondence:

TRANSMITTAL LETTER

(Identify type of correspondence)

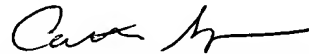
is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 in an envelope addressed to: The Assistant Commissioner for Patents, Washington, D.C. 20231 on

November 7, 2001

(Date)

Catherine Senkfor

(Typed or Printed Name of Person Mailing Correspondence)



(Signature of Person Mailing Correspondence)

ET716351896US

("Express Mail" Mailing Label Number)

Note: Each paper must have its own certificate of mailing.

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

COHN, Howard M.  
The Goodyear Tire & Rubber Company  
c/o Robert W. Brown - Dept. 823  
1144 East Market Street  
Akron, Ohio 44309-3531  
ETATS-UNIS D'AMERIQUE

## PCT

### NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY EXAMINATION REPORT (PCT Rule 71.1)

Date of mailing (day/month/year)	16.10.2001
-------------------------------------	------------

Applicant's or agent's file reference DN1999116PCT	<b>IMPORTANT NOTIFICATION</b>
---	-------------------------------

International application No. PCT/US99/29890	International filing date (day/month/year) 15/12/1999	Priority date (day/month/year) 15/12/1999
---	--	--

Applicant THE GOODYEAR TIRE & RUBBER COMPANY et al.
--

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

#### 4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).


Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

**RECEIVED**

OCT 23 2001

GOODYEAR PATENT  
& TRADE MARK DEPT.

Name and mailing address of the IPEA/   European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer  Mummery, T  Tel. +49 89 2399-8212
--	---



JB

# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>DN1999116PCT</b>	<b>FOR FURTHER ACTION</b>		See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. <b>PCT/US99/29890</b>	International filing date ( <i>day/month/year</i> ) <b>15/12/1999</b>	Priority date ( <i>day/month/year</i> ) <b>15/12/1999</b>	
International Patent Classification (IPC) or national classification and IPC <b>B60C23/04</b>			
Applicant <b>THE GOODYEAR TIRE &amp; RUBBER COMPANY et al.</b>			

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
  
2. This REPORT consists of a total of 7 sheets, including this cover sheet.
 

☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 3 sheets.

3. This report contains indications relating to the following items:

- I    ☒ Basis of the report
- II   ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV   ☐ Lack of unity of invention
- V    ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI   ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand  <b>28/09/2000</b>	Date of completion of this report  <b>16.10.2001</b>
Name and mailing address of the international preliminary examining authority: <div style="display: flex; align-items: center;"> <div>                     European Patent Office                      D-80298 Munich                      Tel. +49 89 2399 - 0 Tx: 523656 epmu d                      Fax: +49 89 2399 - 4465                 </div> </div>	Authorized officer  <b>Hauser-Schmieg, M</b>  Telephone No. +49 89 2399 8478



# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/US99/29890

## I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

### Description, pages:

2-51,53-62	as originally filed	
1,1A,52	with telefax of	28/09/2000

### Claims, No.:

1-25	as originally filed
------	---------------------

### Drawings, sheets:

1/8-8/8	as originally filed
---------	---------------------

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/US99/29890

- ☐ the description,      pages:  
☐ the claims,      Nos.:  
☐ the drawings,      sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes:	Claims	1-25
	No:	Claims	
Inventive step (IS)	Yes:	Claims	1-25
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	1-25
	No:	Claims	

2. Citations and explanations  
**see separate sheet**

**VII. Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:  
**see separate sheet**

**VIII. Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:  
**see separate sheet**

**To Chapter V.2.**

V.2.1. Claims 1-11 related to a RF Transponder

V.2.1.1. Novelty of independent Claim 1

WO 99/52723 A1 (document D1) shows (see figures 2, 3, 3A) and describes:

- An RF transponder (200), comprising:
  - a measurement current source (250, 310) for providing a measurement current ( $I(T)$ ,  $I(T)/N$ ) to a relaxation oscillator (254, 312), the relaxation oscillator comprising a measurement switching circuit (P7, N7; P8, N8; 350), a set-reset circuit (314a, 314b) having a first phase path (314a) and a second phase path (314b), and an output ( $F_{osc}$ ),the transponder further comprising:
  - a logic circuit (318a, 318b);
  - a measurement capacitor (CFX1, CFX2, CP) disposed in the measurement switching circuit (P7, N7; P8, N8; 350);
  - a first transistor (P7, P8), controlled by the logic circuit, for directing the measurement current to the measurement capacitor for charging the measurement capacitor;
  - a second transistor (N7, N8), for discharging the measurement capacitor;wherein the logic circuit provides measurement control signals (PHI1, PHI2) for combining signals indicative of a phase of the set-reset circuit for controlling alternating charging and discharging of the measurement capacitor according to the phase of the set-reset circuit.

Claim 1 differs therefrom in that

- the transponder comprises a current mirror, having transistors controlled by the logic circuit, for mirroring the measurement current in the second transistor;
- the logic circuit combines the signals indicative of the phase of the set-reset circuit with signals from a timing generator for controlling the alternating charging and discharging of the measurement capacitor according to the phase of the set-reset circuit.



**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

---

International application No. PCT/US99/29890

Therefore, the subject-matter of the present claim 1 seems to fulfil the provisions of Art. 33 (2) PCT (Novelty) in view of the state of the art as mentioned in the search report.

V.2.1.2. Inventive Step

The problem to be solved by the present invention may therefore be regarded as to improve measurement in a RF transponder.

Although current mirroring and logic circuits per se are well-known in the art and used for other purposes in the closest prior art documents, the combination, implementation and use of such techniques as claimed in claim 1 is neither described in nor rendered obvious by the state of the art as presently on file.

The present claim 1 seems therefore to fulfil the provisions of Art 33 (3) PCT.

V.2.1.2. Dependent Claims 2-11

Claims 2-11 depending on claim 1 and having as subject-matter special and advantageous embodiments of the invention according to claim 1 seem, together with its subject-matter, to fulfil the provisions of Article 33 (2), (3) and Rule 6 PCT.

V.2.2. Claims 12-20 related to a RF Transponder

The same which has just been mentioned with respect to claims 2-11 is also relevant for claims 12-20, the claims being based on an independent claim (claim 12) defining substantially the same subject-matter as claim 1, but in different wording / a more detailed form.

Consequently, it seems that the claims fulfill the provisions of Article 33 (2) and (3) PCT.

V.2.3. Method Claims 21-25

The claims are based on an independent claim (claim 21) defining a method of generating an oscillating measurement signal corresponding to those features of

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

---

International application No. PCT/US99/29890

independent claim 1 which distinguish the invention defined therein from the closest prior art. Consequently, it seems that the same which has been mentioned with respect to claim 1 and the claims dependent therefrom is also valid for the corresponding method claims 21-25.

It seems therefore that claims 21-25 fulfill the provisions of Article 33 (2) and (3) PCT.

V.2.4. Industrial Applicability

Claims 1-25 seem to fulfil the provisions of Art. 33 (4) PCT, because corresponding RF transponders and methods can be produced / realized and used - at least in the transponder industry.

**To Chapter VII.**

VII.1 In the Claims

The independent claims are not cast properly in the two part form, with those features which in combination are part of the closest prior art (see chapter V.2.) being placed in the preamble; consequently, it does not meet the requirements of Rule 6.3 (b) PCT.

VII.2 In the Description

It should be mentioned that the PCT does not foresee continuation-in-part applications as does the US patent law; consequently, the paragraph related to "cross-reference to related applications" should have been deleted.

The closest prior art document is not identified in the description and the relevant background art disclosed therein is not briefly discussed; therefore, the description does not meet the requirements of Rule 5.1 (a) (ii) PCT.

The state of the art should have been mentioned by publication numbers instead of (unpublished) application or attorney's docket numbers.

A short reference to the claims should have been made in the description (Art. 6 PCT: Support by the description).

**To Chapter VIII.**

VIII.1. Clarity

The application does not meet the requirements of Art. 6 PCT because the claims are not clear and concise.

Although claims 12-20 have been drafted as separate independent claims, they appear to relate effectively to the same subject-matter and to differ from each other only with regard to the definition of the subject-matter for which protection is sought and/or in respect of the terminology used for the features of that subject-matter. The aforementioned claims therefore lack conciseness. Moreover, lack of clarity of the claims as a whole arises, since the plurality of independent claims makes it difficult, if not impossible, to determine the matter for which protection is sought, and places an undue burden on others seeking to establish the extent of the protection.

The vague statements ("according to an aspect of the invention) in the description on pages 8 ff. imply that the subject-matter for which protection is sought may be different to that defined by the claims, thereby resulting in lack of clarity (Article 6 PCT) when used to interpret them (see also the PCT Guidelines, III-4.3a).

10/049724  
JC18 Rec'd PCT/PTC 07 NOV 2001

DN1999116PCT

**RELAXATION OSCILLATOR FOR TRANSPONDER****CROSS-REFERENCE TO RELATED APPLICATIONS**

This application relates to PCT applications Serial no. PCT/US99/29723 entitled POWER ON RESET FOR TRANSPONDER, Serial No. PCT/US99/29827, entitled PROGRAMMABLE MODULATION INDEX FOR TRANSPONDER and Serial No. PCT/US99/29840 entitled PROGRAMMABLE TRIMMING FOR TRANSPONDER, each having a filing date concurrent with that of the present application.

This application is a continuation-in-part of commonly-owned, copending PCT applications Serial Nos. PCT/U99/29668 and PCT/US99/29606 both filed on 14 December 1999, which in turn are continuation-in-part of commonly-owned, copending PCT application Serial Nos. PCT/US98/07338, PCT/US99/07836 and PCT/US99/07575 all filed on 14 April 1998.

This application claims the benefit of U.S. Provisional Patent Application No. 60/134,455, filed May 17, 1999 by Yones.

**TECHNICAL FIELD OF THE INVENTION**

The present invention relates to monitoring pressure and temperature and, more particularly in conjunction with transponders associated with the tires for transmitting pressure and temperature measurements to an external (e.g., on-board) receiver (reader, or reader/interrogator).

**BACKGROUND OF THE INVENTION**

Safe, efficient and economical operation of a motor vehicle depends, to a significant degree, on maintaining correct air pressure in all (each) of the tires of the motor vehicle. Operating the vehicle with low tire pressure may result in excessive tire wear, steering difficulties, poor road-handling, and poor gasoline mileage, all of which are exacerbated when the tire pressure goes to zero in the case of a "flat" tire.

The need to monitor tire pressure when the tire is in use is highlighted in the context of "run-flat" (driven deflated) tires, tires which are capable of being used in a completely deflated condition. Such run-flat tires, as disclosed for example in commonly-owned USP 5,368,082, incorporated in its entirety by reference herein, may incorporate reinforced sidewalls, mechanisms for securing the tire bead to the rim, and a non-

28-09-2000

99968126.5 - US99/29890

DESC

13

pneumatic tire (donut) within the pneumatic tire to enable a driver to maintain control over the vehicle after a catastrophic pressure loss, and are evolving to the point where it is becoming less and less noticeable to the driver that the tire has become deflated. The broad purpose behind using run-flat tires is to enable a driver of a vehicle to continue

a dashed line. The transistor P6 is connected in a current-mirroring configuration with the transistors P1, P2 and P4 in the temperature sensing and current mirroring circuitry (comparable to 306 and 308 in Figure 3, but only transistors P4 and N5 are shown in Figure 5) such that these current mirror gates are connected via line 505 (compare 305) which supplies a reference voltage Pbias to the gate of transistor P6. Because of the current mirror connection, the current through transistors P4 and P6 will mirror the PTAT current  $I(T)$  through the external resistor Rext 416, 216. The voltage supply for the programmable current scaling circuit 510 is voltage Vcc provided on line 503 (compare 303). As explained hereinabove, the voltage Vcc is regulated and substantially independent of temperature. The use of the analog supply voltage Vcc is an improvement over the previous (circuit 310) use of the digital supply voltage Vdd, because the voltage Vcc is "cleaner," not having any digital switching noise imposed on it. For the sake of simplicity, the transistors P4, P6, P6.05, P6.1, P6.2, and P6.4 are illustrated as single transistors. It is within the scope of this invention to implement these transistors as cascodes, as mentioned hereinabove for the transistors such as P1, P2 and P4 of the circuits 306 and 308 of Figure 3. It should be understood that such cascode transistors used in a current-mirror arrangement would have separate bias lines (e.g., Pbias would be split into Pbias' and Pbias'') connecting the gates of the transistors in each stage of the cascode current mirror.

As in the current scaling circuit 310, the transistors P4 and P6 are connected in a current-mirroring configuration. However, instead of the circuit 310 transistors P5 and P6 having a fixed ratio of physical areas to scale the mirrored current, in the programmable circuit 510 of this invention the transistor P6 has a programmable ratio of physical areas compared to the transistor P4 (and transistors P1, P2 of circuit 306 and 308) with which P6 is mirror-connected. The physical area of transistor P6 is changed by additional scaling transistors (e.g., P6.05, P6.1, P6.2, and P6.4) which are added in parallel to transistor P6, and switched into use by switches under the control of certain of the trimming bits 436b and also control signals from the row decoder & N<sub>i</sub>, N<sub>j</sub> control circuit 442. It should be understood that each of the transistors P4, P6, P6.05, P6.1, P6.2, and P6.4 illustrated in Figure 5 has a suitable physical area which could be determined by the size of an individual transistor, or could be the result of adding together the physical areas of

# PCT

## NOTIFICATION RELATING TO PRIORITY CLAIM

(PCT Rules 26bis.1 and 26bis.2 and  
Administrative Instructions, Sections 402 and 409)

From the INTERNATIONAL BUREAU

To:

COHN, Howard, M.  
c/o CcRobert W. Brown Dept. 823  
The Goodyear Tire & Rubber Company  
1144 East Market Street  
Akron, OH 44309-3531  
ETATS-UNIS D'AMERIQUE

Date of mailing (day/month/year) 19 July 2001 (19.07.01)	
Applicant's or agent's file reference DN1999116PCT	IMPORTANT NOTIFICATION
International application No. PCT/US99/29890	International filing date (day/month/year) 15 December 1999 (15.12.99)
Applicant THE GOODYEAR TIRE & RUBBER COMPANY et al	

The applicant is hereby notified of the following in respect of the priority claim(s) made in the international application.

1. ☐ **Correction of priority claim.** In accordance with the applicant's notice received on: ,  
the following priority claim has been corrected to read as follows:  
  
☐ even though the indication of the number of the earlier application is missing.  
☐ even though the following indication in the priority claim is not the same as the corresponding indication appearing in the priority document: .
2. ☒ **Addition of priority claim.** In accordance with the applicant's notice received on: 13 March 2000 (13.03.00),  
the following priority claim has been added:  
US 17 May 1999 (17.05.99) 60/134,455  
  
☐ even though the indication of the number of the earlier application is missing.  
☐ even though the following indication in the priority claim is not the same as the corresponding indication appearing in the priority document: .
3. ☐ As a result of the correction and/or addition of (a) priority claim(s) under items 1 and/or 2, the (earliest) priority date is:
4. ☐ **Priority claim considered not to have been made.**  
☐ The applicant failed to respond to the Invitation under Rule 26bis.2(a) (Form PCT/IB/316) within the prescribed time limit.  
☐ The applicant's notice was received after the expiration of the prescribed time limit under Rule 26bis.1(a).  
☐ The applicant's notice failed to correct the priority claim so as to comply with the requirements of Rule 4.10.  
The applicant may, before the technical preparations for international publication have been completed and subject to the payment of a fee, request the International Bureau to publish, together with the international application, information concerning the priority claim. See Rule 26bis.2(c) and the PCT Applicant's Guide, Volume I, Annex B2(IB).
5. ☐ In case where multiple priorities have been claimed, the above item(s) relate to the following priority claim(s):
6. A copy of this notification has been sent to the receiving Office and  
☐ to the International Searching Authority (where the international search report has not yet been issued).  
☒ the designated Offices (which have already been notified of the receipt of the record copy).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer  Sean Taylor
Facsimile No. (41-22) 740.14.35	Telephone No. (41-22) 338.83.38

## PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

To:

Commissioner  
US Department of Commerce  
United States Patent and Trademark  
Office, PCT  
2011 South Clark Place Room  
CP2/5C24  
Arlington, VA 22202  
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing:

21 June 2001 (21.06.01)

International application No.:

PCT/US99/29890

Applicant's or agent's file reference:

DN1999116PCT

International filing date:

15 December 1999 (15.12.99)

Priority date:

Applicant:

YONES, Dale, Lee

1. The designated Office is hereby notified of its election made:



in the demand filed with the International preliminary Examining Authority on:

28 September 2000 (28.09.00)



in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was

was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer:

J. Zahra

Telephone No.: (41-22) 338.83.38